Behavioural Insights in Consultation Design: A Dialogical Architecture

Fabrizio CAFAGGI* and Giacomo SILLARI**

Abstract[1]

In this paper, we examine consultation procedures in the light of behavioural sciences. We feature consultation as a dialogue between the administration and the participants in the form of a public good game with one or more tournaments. Our focus is on the architecture of the dialogue and its design. We propose three models characterised by the varying degrees of the interaction among participants, and between participants and the administration, occurring during the consultation process. We suggest that mapping stakeholders according to homogeneity of interest influences the structure and affects the dialogue taking place during the consultation process. We then examine the levels of efforts parties would engage in, defining models that maximise efforts and adjust for different cognitive stakeholders' capabilities, advocating an empirical approach. The paper concludes with policy recommendations on how to improve the current consultation design deployed at EU and national level.

I. Introduction

Consultation is part of a broader set of tools to ensure stakeholder participation in the activities of both public and private institutions. Various forms of engagement may reflect different perspectives of citizens' participation. In relation to public institutions, stakeholders' engagement should be granted at all of State, regional, and international levels.[2] Consultations broaden the active involvement of citizens in the exercise of institutional powers: legislation, administration, adjudication. As to private institutions engaged in rule-making participation, the consultation process can ensure legitimacy and improve effectiveness.

Stakeholders' engagement should be pursued not only at the level of policy design but also of policy implementation and evaluation, as it pertains to the entire policy

* Consiglio di Stato.

** Luiss Guido Carli, Rome.

[1] This paper was inspired by and drawn from joint lectures at Luiss Guido Carli, Rome. We are grateful to the participants who helped us in identifying the issues and refining the hypotheses. In particular we would like to thank Laura D'Aprile, who contributed to the definition of issues that sparked the design of experiments and the ensuing theoretical discussion that followed suit. Corresponding author: Giacomo Sillari (gsillari@luiss.it).

[2] For EU see J Mendes, *Participation in EU Rule-making: A Rights-based Approach* (Oxford, Oxford University Press 2011); for the international setting see A Berman, "Participation in international governance 2.0" (unpublished manuscript on file with the author, 2017).

European Journal of Risk Regulation, 9 (2018), pp. 603–631
doi:10.1017/err.2018.54

cycle.[3] Growing concerns focus on the accessibility and exclusion of large segments of civil society from effective participation in both the legislative and the administrative process.[4] It is still a matter of debate what constitutes inclusive policy-making and which tools should be used to ensure effective participation by those ultimately affected by the decisions.[5] However, more attention should be devoted to the different workings of the various tools that can be deployed in the consultation processes.

Principles concerning open government, defining citizens' access to legislative and administrative procedures, have been put forth in many charters and declarations. There is general consensus over the core principles, which should include participation, inclusiveness, openness, effectiveness, and coherence.[6] However, divergences emerge on how these principles should be applied. The principles are not necessarily always consistent with one another, hence trade-off decisions may be needed, for example between inclusion, effectiveness, and coherence. These principles, and the trade-off decisions occurring in their implementation, greatly affect consultation design. We propose a conceptual framework for consultation design that incorporates incentives for participation (effectiveness) and adequate consideration of cognitive (in)abilities of potential participants (inclusiveness).

To examine the issue we deploy behavioural sciences, both in the perspective of behavioural game theory (to study intrinsic motivation to participate) and in that of behavioural science (to study the impact of heuristics and bias on the consultation procedure). The procedural dimension of consultation has not been fully investigated in light of behavioural sciences. The democratic values underlying open government may be undermined by an architecture of participation that does not warrant inclusion of groups and communities with lower resources and cognitive abilities.[7] Hence, here the definition of stakeholder engagement is more on implementation than on principles. Mapping stakeholders ex ante becomes a strategically significant element of the

[3] See A Alemanno, "Stakeholder Engagement in Regulatory Policy" in *Regulatory Policy Outlook* (OECD Publishing 2015).

[4] See OECD, "The Public Consultation on the draft OECD Recommendation of the Council on Open Government" (2017) available at < goo.gl/C49ZxD > (last accessed on 25 September 2018): "Grant all stakeholders equal and fair opportunities to be informed and consulted, and to actively engage in policymaking and service design and delivery, at a minimal cost, avoiding duplication to minimise consultation fatigue, with adequate time, dedicating specific efforts to reach out to the most relevant, vulnerable, underrepresented, or marginalised segments of society, while avoiding policy capture by interest groups …".

[5] See OECD, "OECD best practice principles on stakeholder engagement in regulatory policy" (2017) available at < goo.gl/mWftM4 > (last accessed on 25 September 2018): "10. Open and inclusive policy making as promoted by the OECD is a culture of governance that builds upon the idea of opening up policy-making processes to stakeholders beyond the public administration to better design policies by broadening the evidence base.
It recognises that the public administration does not hold the monopoly of expertise but that other stakeholders (citizens, civil society, private sector etc) have valuable information and ought to express their needs and expertise.
It emphasises the responsiveness of policies and services in actively involving those that will be affected by the policy; it is user-centred.
It relies on an inclusive approach where all relevant actors are involved and attention is paid to marginalised, disadvantaged or less powerful groups.
It can be conducted in different degrees and different modalities, ranging from providing information to consulting and to active engagement in the design, implementation and evaluation stage of a policy".

[6] See EU Commission, "Guidelines on stakeholder consultation" (2014) available at < ec.europa.eu/info/sites/info/files/better-regulation-guidelines-stakeholder-consultation.pdf > (last accessed on 25 September 2018).

[7] See RB Stewart, "Remedying disregard in global regulatory governance: accountability, participation, and responsiveness" (2014) 108(2) American Journal of International Law 211.

consultation architecture in order to ensure that relevant interests are duly taken into consideration. Stakeholder mapping therefore goes beyond being a mere descriptive exercise, as it possesses an important normative character.[8] While in this article we concentrate on the issue of stakeholder mapping and its behavioral relevance for the consultation process, we are aware that a behavioural approach to consultation is broader than what we put forth here. Next to the strategic and cognitive behavioural components that we analyse in this paper there are at least two more fundamental behavioural sides of consultation design that we plan to cover in future research. First, the choice of *tools* in specific consultation design should be motivated by behavioural considerations. For instance, a specific consultation tool may be thought of as more efficacious to counter cognitive biases that are expected to appear among stakeholders, therefore it should be tested to discover whether it would in fact be efficacious, and hence deployed if the test were positive. Second, the issue of cognitive bias needs to be taken into account not only in connection with shareholders, but also *in connection with the administration*, in that administrative decision-making processes should also be analysed through a behavioural lens, as its agents are victims of cognitive bias just as much as stakeholders are.[9]

Stakeholder engagement is not only an issue for EU and international public institutions but it also characterises the evolution of transnational and domestic private regulation.[10] Global private standard setters have made significant progress in defining procedures that involve stakeholders in standard setting, monitoring, and enforcement.[11] Differences emerge between single and multistakeholder organisations where the framing of the consultation may reflect the co-existence of divergent views about the new policy.[12] A comparative analysis of consultation in public and private standard setting processes is beyond the scope of this paper. It is, however, worth noticing that there has been mutual influence between public and private organisations when promoting stakeholders' engagement, but differences in instruments and effectiveness are significant. In fact, the engagement process can derail and lead to outcomes of regulatory capture. It is therefore paramount that both at the level of economic incentives *and* at the level of intrinsic motivation, the architecture of consultation mechanisms take into account capture risks and deploy tools that presumably would reduce or eliminate such risks. Instead of focusing on material incentives to rule out capture, in this paper we focus on intrinsic incentives and explore their interplay with cognitive factors; in so doing, we purport to introduce new tools to better protect weaker stakeholders. For instance, considerations related to the cognitive abilities of stakeholders might reveal

[8] See for example UNDP, *Multi-Stakeholder Decision-Making: A Guidebook for Establishing a Multi-Stakeholder Decision-Making Process to Support Green, Low-Emission and Climate-Resilient Development Strategies* (2012) available at < goo.gl/5fNAMx > (last accessed on 2 November 2018).

[9] Applying behavioural insights analysis to regulators rather than to citizens is an often neglected topic. For an example of it, see the last chapter in World Bank, *World Development Report 2015: Mind, Society, and Behavior* (World Bank Group 2015). See below.

[10] See F Cafaggi, "The Many Features of Transnational Private Rule-Making: Unexplored Relationships between Custom, Jura Mercatorum and Global Private Regulation" (2015) University of Pennsylvania Journal of International Law 875, available at < scholarship.law.upenn.edu/jil/vol36/iss4/2 > (last accessed on 25 September 2018).

[11] See F Cafaggi, "A comparative analysis of transnational private regulation: legitimacy, quality, effectiveness and enforcement" (2014), available at < ssrn.com/abstract=2449223 > or < dx.doi.org/10.2139/ssrn.2449223 > (last accessed on 25 September 2018).

[12] See Cafaggi, supra, note 10.

that some of them are in a weaker position than they were otherwise assumed to be, and therefore require better engagement promotion. Or, consider that engagement relies particularly on intrinsic motivation, especially when it comes to stakeholders that are affected by policy decisions and yet lack a significant voice if not participating *en masse* in the process. Thus, by focusing on intrinsic motivation and cognitive abilities, we highlight both new possible risks of regulatory captures and new possible remedies.

This article is structured as follows: After this introductory section, in section II we provide a principled justification for the adoption of a dialogical architecture in the consultation procedure. Section III details the behavioural point of view of our analysis, covering (section III.1) the heuristic and bias themes relevant to consultation and (section III.2) the behavioural game-theoretic aspects in both dimensions of the dialogue between administration and stakeholders and of the dialogue among stakeholders. The strategic structure is formally described in section IV, while section V puts forth three dialogical models summing up the elements elaborated in the previous sections. Section VI counters a possible objection and section VII concludes with policy recommendations.

II. A DIALOGICAL APPROACH TO CONSULTATION

There is no conceptual consensus over the distinction between consultation and other forms of stakeholder engagement.[13] Consultation differs from information transfer and from other forms of stakeholder engagement.[14] It is generally defined as an instrument to engage stakeholders and ensure their active participation.[15]

Consultation design may affect the ability to participate in the decision-making process and influence the final decision made by the consulting body. Publishing the document on a website is a necessary but not sufficient condition to ensure inclusive and effective participation. Both in open-to-the-public and in targeted consultations, the procedural features may affect the effective participation. For instance, in targeted consultations, where only a selected group of stakeholders are involved, using several consultation instruments for different groups of stakeholders, based on the specific cognitive resources of stakeholders, may promote participation and result in an overall better quality outcome. Consultation may aim at acquiring new information and/or at

[13] See OECD, "Open Government: The Global Context and the Way Forward" (2016), available at < goo.gl/jRKxYT > (last accessed on 25 September 2018).

[14] See for example the distinction made in OECD, supra, note 4.

"Stakeholders' participation: all the ways in which stakeholders (ie citizens, private sector, and civil society organisations) can be involved in policymaking and service design and delivery, including:

Information: a one-way relationship in which government produces and delivers information to stakeholders. It covers both "passive" provision of information, upon demand, and "active" measures by government to disseminate information. This relationship could also encompass information that citizens provide to governments.

Consultation: a two-way relationship in which people provide feedback to government. It is based on the prior definition by government of the issue on which stakeholders' views are being sought and requires the provision of information to them.

Engagement: a relationship based on partnership with government, in which stakeholders are given the opportunity and the necessary resources (information, data, digital tools etc.) to actively engage in defining the process and content of policy making and service design and delivery. It acknowledges the right of stakeholders to take part in setting the government's agenda, proposing and weighing different options, and shaping the dialogue. Although the responsibility for the final decision generally rests with government, stakeholders hold the government responsible through the political process."

[15] See OECD, supra, note 4; OECD, supra, note 5; EU Commission, supra, note 6; OECD, supra, note 13.

testing predefined hypotheses. In the former case information can come from experts or stakeholders. The process of information acquisition includes technical information originating from experts and non-technical information originating from interest groups like industries and civil society organisations. Our analysis focuses on stakeholders and will not address consultation design when experts are the target.

The definition of objectives, the stakeholder mapping, the correlation between various tools and classes of stakeholders, the duration and the number of rounds, all are strategic characteristics of a consultation procedure.[16] When mapping stakeholders, a key distinction is one between those who will implement the regulation and those who are affected by the results of the regulation. The position of the administration may differ in comparison to that of the various participants. In relation to some stakeholders the administration can be less informed (often this is the case with industry) and needs to acquire information. In relation to other stakeholders it can be more informed and the consultation process should aim at generating their cognitive empowerment by transferring information to the less informed.[17] These observations suggest that two goals be incorporated in the design of the consultation process. In the former case, the consultation design should aim at reducing the information asymmetry so that the administration can make a better informed decision. In the latter case, the design should aim at enabling the (potentially) negatively-affected and less-informed stakeholders to learn and overcome their cognitive limitations. These different objectives may influence the procedural design and the dialogical structure of the consultation. They may also call for a different stakeholder mapping for policy design and policy evaluation. Hence both consultation design and the identification of stakeholders may change from the *ex ante* to the *ex post* stage.

Mapping is crucial for identifying groups that might have interest and power to impact the policy initiative and groups that may only be affected by the policy at stake without being in a position to fully influence it. But even more important is to make sure that groups representing conflicting interests participate in the consultation in proportion to their "social weight",[18] in order to guarantee that divergent views can all be taken into account by the administration. A fair chance to participate means that each relevant stakeholder group should be given an opportunity to make their opinion heard. However, stakeholders' relative weight may vary according to their influence and the

[16] See EU Commission, supra, note 6, where guidelines are put forth in which it is specified that consultation design has to include:
"the objective of the consultation;
the elements for which this is necessary (nature of the problem, policy options, etc);
the target group (general public or a special category of stakeholders, etc);
the appropriate consultation tool (consultative committees, expert groups, ad hoc meetings, consultation via internet, etc);
and the appropriate time frame for consultation."

[17] See C Sunstein, "Cost-Benefit Analysis and the Knowledge Problem" (2014), available at < ssrn.com/abstract=2508965 > (last accessed on 25 September 2018). In the paper, Sunstein tackles the issue of asymmetric information between regulators and citizens tracing its intellectual history to Hayek, but focusing only on one direction of the asymmetry (the knowledge problem) rather than on both (cognitive empowerment), as we do in this article.

[18] In fact, equal participation might mean that weaker stakeholders should be *over* represented in the consultation process. We consider equality and fairness in results as the endpoint of a consultation process that might be achieved by unequal means, for instance by giving more voice to weaker stakeholders, or by weighing and correcting opinions that display cognitive bias favouring particular stakeholders.

disproportionate participation of one constituency compared to others may have a stronger impact, unduly influencing the outcome of the consultation process.[19]

The nature of the stakeholders' interests can affect the cooperative or competitive structure of the consultation process and of its design. Stakeholders' interests may be aligned or conflicting. Hence grouping stakeholders according to the degree of interests' homogeneity may have procedural implications for consultation design. A dialogue among conflicting stakeholders may have different outcomes from a dialogue between homogeneous stakeholders.

What should then drive the choice of instruments for stakeholders engagement? The choice of instruments should be correlated to the various objectives of the consultation process and the degree of interests' heterogeneity. The maximisation of stakeholders' dialogue suggests the use of a single instrument where the different entities, individuals and organisations, can take part and engage. But heterogeneity of stakeholders based on different economic and cognitive endowments may lead to ineffective participation. Relevant variations in stakeholders' endowments may require the use of different tools according to "homogenous" classes of stakeholders. We recommend to differentiate among stakeholders within the same consultation instrument to the extent possible. Only if the level of heterogeneity is too high do we suggest the adoption of different consultation tools. In the latter case they should be coordinated so that consistent findings can be drawn.

III. Designing the dialogues

The following analysis focuses on a particular type of consultation where the consulting administration decides: (1) the modes of participation in the consultation by differetnt classes of stakeholders; and (2) the degree of interaction between the participants. We do not examine fora or other interactive instruments where the administration acts more as a facilitator.[20] We include in the analysis both open access and targeted consultation.[21] We shall address the issue of what *kind* of interaction takes place in a consultation, argue that it is a strategic interaction of the kind studied by the theory of games and frame our analysis in game-theoretic terms.

[19] See OECD, supra, note 5:
"26. Despite the wide recognition of the importance of stakeholder engagement, there are still many challenges connected with its application. The most important ones that are often mentioned include:
The risks of stakeholder engagement activities being captured by organised interest and pressure groups;
Difficulties in reaching out to some groups stakeholders and wider society in general;
Engaging stakeholders too late in the regulatory process, ie when the decision has been actually made and there is little will to change it, resulting in low public participation rates in the future,
Engaging too often, particularly in academic debates or with insufficiently precise plans and information, and/or not responding or reflecting stakeholder input in the final outcome, engendering 'consultation fatigue'".

[20] Also, in this article we do not address the decision-making process of the administration, either at the level of resources, timing, politics, or at the level of cognitive bias potentially involved in it (with the exception, see section III.1 below, of considering the administration's *confirmation bias*). While crucial, these aspects are best considered after the behavioural elements that pertain to stakeholder engagement and participations are laid on the table, which remains the aim of the current paper.

[21] EU Commission, supra, note 6: "Open public consultation reaches a wide spectrum of respondents without, however, ensuring full representativeness. The relevance of opinions collected needs, therefore, to be thoroughly assessed. Open public consultations can foster transparency and accountability and ensure broadest public validation and support for an initiative".

Consultation, we have said, may pursue different objectives: gaining legitimacy, acquiring information, promoting stakeholder dialogue. In this analysis we focus on the production and transfer of information from stakeholders to the administration and the exchange of information among stakeholders. We consider two potentially combined dialogues: between administration and participants, and among participants.

The creation of a dialogue between the administration and the participants – through the design of the consultation procedure – ultimately pursues a twofold, intertwined, objective: (1) producing and transferring information; and (2) influencing the final decision of the administration. The dialogue between stakeholders aims at ensuring a level playing field to influence the administration's final decision (as aim (2) invokes issues of equality of access) and at redistributing knowledge among participants (which, in turn, can foster aim (1) above). The dialogue can also affect participants' views and change their positions during the consultation procedure.

Participants in the consultation can be thought of as a "community" whose identity is *ex ante* unknown by the administration since the decision to take part in the consultation is always voluntary and depends on the incentive structure. However, this community is often composed by repeat players who take part in various consultations over time. The degree of knowledge between participants may determine whether they should be considered as partners or strangers and partly define the degree of mutual trust and the incentives to produce new information.[22] The "community" is also composed of members whose interests are usually conflicting and the consultation design must ensure equal opportunity to access and express their views. A third dimension of community's governance in consultation procedures is the relationship between individual and collective interests.

The aim to generate new information can be framed within two dialogical structures that need to be kept separate though coordinated: One is the dialogue between the party designing and implementing the consultation (hereinafter the administration) and the participants (the community[23]). The other is the dialogue amongst the participants during and after the consultation. As we shall show, lumping them together or focusing only on the former dimension can generate procedural fallacies in consultation design.[24] Such procedural fallacies can, in turn, undermine the objectives of consultation, generating biased information about stakeholders' opinions.

---

[22] On the differences between a pool of strangers and a pool of partners in the production of public good see J Andreoni and R Croson, "Partners versus strangers: random rematching in public goods experiments" in C Plott and VL Smith (eds), *Handbook of Experimental Economics Results* (Amsterdam, North-Holland 2008) 776; for a summary of the literature see C Camerer, *Behavioral Game Theory: Experiments in Strategic Interaction* (Princeton, Princeton University Press 2004); for a more recent overview see A Chaudhuri, "Sustaining cooperation in laboratory public goods experiments: a selective survey of the literature" (2011) 14(1) Experimental Economics 47. If the consutation procedure is determined to be a repeated interaction, in which issues of reputation or reciprocity matter, then partner design would be preferred.

[23] Among the participants there might be also other administrations.

[24] The predominant approach used by the EU Commission is that publication should occur at the end of the consultation, *cf* EU Commission, supra, note 5: "Publication of contributions on the webpage. After a consultation has ended, the contributions made by stakeholders should be published. Contributions should be published in the languages in which they were submitted and/or the language used for the consultation activity. Written contributions should be made public on the dedicated consultation webpage. In the case of stakeholder consultation events (meetings, hearings, conferences, etc), summary minutes and speeches or presentations provided during the event should be made public on the consultation webpage".

1. Bias and cognitive empowerment

If consultation design aims at increasing participation, quality of information, and fairness of stakeholder engagement, it should be taken into account that both the administration and the recipients of the consultation are subject to decision-making and judgment bias of the kind studied in the behavioural sciences. Moreover, since a consultation is a multi-agent, interactive decision problem, a thorough analysis of the behavioural element needs to be combined with the strategic interaction(s) taking place in the consultation. In both cases (individual and strategic decision-making) we will be looking at consultation through a behavioural lens. In the former case (individual decision-making) the relevant behavioural insights are those emanating from prospect theory, the heuristics and bias program and, to an extent, ecological rationality. In the latter case (strategic decision-making) we refer the reader to the literature pertaining to behavioural and experimental game theory.[25] It is important to notice that in both the case of individual and strategic decision-making we do *not* subscribe to the paradigm of *homo oeconomicus* rationality, and rather make in both cases the cohesive, coherent and evidence-based assumption that agents make decisions systematically diverging from "rational" ones.

As we pointed out in section II, consultation design should aim to: (i) increase participation; (ii) improve quality of information; and (iii) increase or ensure fairness of stakeholder engagement. In this subsection we consider systematic biases in the way people make decisions and judgments in relation to the three elements above. Notice that behavioural and judgment biases have a twofold relevance for consultation design. On the one hand, biases may hinder participation for certain stakeholders, hence intervening on their pursuit of goals (i) and (iii) their increasing participation and procedural fairness. On the other hand, the offering of biased judgment may hinder goal (ii) of obtaining quality information. Thus, the behavioural element is relevant both for increasing participation and for improving quality of the information conveyed.

Several kinds of bias and behavioural regularities are relevant for consultation. Each specific consultation can be affected by specific kinds of bias, depending on its subject matter, its recipients, its techniques, etc; hence the general behavioural analysis offered here should be refined on a case-by-case basis to fully identify impactful biases and therefore the appropriate consultation architecture remedies. Nevertheless, we provide

[25] For prospect theory, see A Tversky and D Kahneman, "Prospect Theory: An Analysis of Decision under Risk" (1979) 47(2) Econometrica 263; for heuristics and bias, most of the relevant literature is collected in D Kahneman, P Slovic, and A Tversky (eds), *Judgment Under Uncertainty: Heuristics and Bias* (Cambridge, Cambridge University Press 1982); see also T Gilovich, D Griffin and D Kahneman, *Heuristics and Biases: The Psychology of Intuitive Judgment* (Cambridge, Cambridge University Press 2002), D Kahneman and A Tversky (eds), *Choices, Values and Frames* (Cambridge, Cambridge University Press 2000), C Camerer, M Rabin and G Loewenstein (eds), *Advances in Behavioral Economics* (New York, Russell Sage Foundation 2004); for ecological rationality, see the work of Gigerenzer and the ABC group (eg G Gigerenzer and P Todd, *Ecological Rationality: Intelligence in the World* (New York, Oxford University Press 1999). For a general account of behavioural economics, see E Angner and G Loewenstein, "Behavioral Economics" in U Mäki (ed), *Handbook of Philosophy of Science vol 13: Philosophy of Economics* (Amsterdam, Elsevier 2012). For popularised accounts, see D Kahneman, *Thinking, Fast and Slow* (New York, Macmillan 2011), R Thaler, *Misbehaving: The Making of Behavioral Economics* (New York, WW Norton & Company 2015) and R Thaler and C Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven, Yale University Press 2008). For behavioural game theory, the main reference continues to be Camerer, supra, note 18. See also specific references in section III.2 below.

here a list that, far from being exhaustive, includes the most relevant and impactful behavioural bias and regularities.

First, consider that the very process of consulting citizens can be construed as an attempt to de-bias the consulting administration. Maybe the administration lacks information, maybe it lacks proper weighing of the information, maybe it lacks knowledge about what issues citizens care about the most or most deeply. These biases can be systemic. For instance, the administration could be subject to a confirmation bias.[26] Confirmation bias is the tendency to selectively search for information that only supports one's position, or to not interpret information impartially. The bias has often been observed and studied in political contexts.[27] If an administration makes relevant decisions based only or mostly on information that supports its views, the resulting decision may be removed from reality and fall short of the public's expectations and needs. When an administration uses information selectively and does not weigh information impartially, this could be because selection and interpretation are aligned with previously-held beliefs, confirming them. Asking for citizens' and stakeholders' opinion would allow an inflow of information countering the stance of the administration, possibly with the effect of shifting the focus of the regulation at stake. That said, of course the addressees of the consultation process can also be victims to confirmation bias, suggesting that consultation design should take into account this possibility and lower the incidence of this specific bias when implementing consultation procedures. Especially in surveys and other kinds of structured consultation processes, questions can and should be designed in such a way as to force participants to consider contrasting hypotheses and contrasting evidence for a given hypothesis.

Secondly, there is ample evidence that people are subject to the so-called *framing* effect. In its original definition, the framing effect takes place when logically equivalent (but not transparently equivalent) versions of a given decision problem between two alternatives provoke a dramatic shift in the preferences of respondents from one alternative to another.[28] A relevant behavioural consequence of framing is that decision makers prefer less risky options in a positive context (gain frame) and prefer riskier options in a negative context (loss frame). A less stringent definition of framing, widely used in political science, indicates that a framing effect is at work whenever the "emphasis on a subset of potentially relevant considerations causes individuals to focus on these considerations when constructing ther opinions".[29] Since in the context of political science framing can easily be seen as a tool readily available for elites to manipulate citizens, it is relevant to study conditions under which framing is more or less likely to operate. In the case of consultation design, the scope of framing effect is obviously large, as the framing of a consultation survey or questionnaire can readily

[26] See RS Nickerson, "Confirmation bias: a ubiquitous phenomenon in many guises" (1998) 2(2) Review of General Psychology 175.

[27] See eg B Tuchman, *The March of Folly: From Troy to Vietnam* (New York, Ballantine Books 1984), claiming that an administration will be subject to confirmation bias once a policy has been issued, so that evidence will be sought or interpreted in ways that favour the policy that has been made, or R Jervis, *Perception and Misperception in World Politics* (Princeton, Princeton University Press 1976), on the tendency to "explain away" undesirable evidence.

[28] A Tversky and D Kahneman, "The framing of decisions and the psychology of choice" (1981) 211 (4481) Science 453.

[29] JN Druckman, "The implications of framing effects for citizen competence" (2001) 23(3) Political Behavior 225.

influence respondents. This suggests that, as in the case of confirmation bias above, the consultation design should actively tackle the issue of framing and try to neutralise its effect. There is substantial evidence[30] that presenting *counterframes* reduces the impact of the framing effect, hence, in designing certain kinds of consultations, one should carefully craft them so that a plurality of framings are provided. The behavioural impact of framing on the procedures, and hence on the results of the consultation process, is what supports the definition of our consultation models in section V.

Thirdly, and still related to the framing effect, participation in the consultation process itself can be framed in different ways to the recipients. For instance, different types of framing, including participation as an opportunity to exert one's civic duty, or as an opportunity only available for a limited amount of time, or as an opportunity to possibly avoid negative consequences of the administration's decision, etc all have an impact on participation.[31] The consulting procedure, thus, should be designed to maximise the combined effects of different framings in order to achieve higher degrees of participation.

Fourthly, the tendency to underweigh the future relative to the present (the so-called *present bias*) can be a significant hindrance for consultation participation. Present bias may be particularly relevant in consultation that focuses on long-term decisions where there is a gap between time of decision and time when the effects of the decision will materialise. In particular, stakeholders that are affected by the result of the consultation but that individually have little power to affect the legislative process can be more heavily affected by present bias, even when they recognise that participation to the consultation is relevant. Stakeholders may have the intention to participate in the future, and yet avoid taking part in the consultation when the consultation takes place because of the (small) costs of participation in terms of time and opportunity linked to participating in the consultation, thereby possibly limiting their future welfare in a regrettable way. One of the most widely suggested nudges[32] to counter present bias is the adoption of commitment devices: interventions that substantially increase the actual cost of not following up on one's intentions for the future. While this kind of intervention seems unlikely to be applicable in the context of consultation, other tactics aiming at mitigating present bias could. For instance, it is a well-established empirical finding[33] that making a

[30] See, for instance, P Sniderman and S Theriault, "The structure of political argument and the logic of issue framing" in W Saris and P Sniderman (eds), *Studies in Public Opinion: Attitudes, Nonattitudes, Measurement Error, and Change* (Princeton, Princeton University Press 2004) 133; P Brewer and K Gross, "Values, framing, and citizens' thoughts about policy issues: effects on content and quantity" (2005) 26(6) Political Psychology 929; M van Londen, M Coenders and P Scheepers, "Effects of issue frames on aversion to ethnic-targeted school policies" (2010) 6(3) Methodology: European Journal of Research Methods for the Behavioral and Social Sciences 96; B van Gorp, "Strategies to take subjectivity out of framing analysis" in P D'Angelo and J Kuypers (eds), *Doing News Framing Analysis: Empirical and Theoretical Perspectives* (Routledge 2010) 84.

[31] See R Groves, R Cialdini and M Couper, "Understanding the decision to participate in a survey" (1992) 56(4) Public Opinion Quarterly 475.

[32] See Thaler and Sunstein, supra, note 21; C Sunstein, "The council of psychological advisers" (2016) 67 Annual Review of Psychology 713; C Sunstein, "'Better Off, as Judged by Themselves': Bounded Rationality and Nudging" in R Viale (ed), *Routledge Handbook on Bounded Rationality* (Routledge 2018).

[33] DW Nickerson and T Rogers, "Do you have a voting plan? Implementation intentions, voter turnout, and organic plan making" (2010) 21(2) Psychological Science 194; U Bayer et al. "Responding to subliminal cues: do if-then plans facilitate action preparation and initiation without conscious intent?" (2009) 27(2) Social Cognition 183. The result extends to domains other than political participation.

plan to go to vote substantially increases turnout. Another intervention to mitigate present bias relies on attaching an immediate reward to the intended costly action,[34] in this case participation to the consultation. The immediate reward need not be material. In fact, one could think of online fora or other online participatory platforms in which participation is rewarded socially (for instance, with the possibility of receiving "upvotes" for particularly thoughtful or well-researched opinion) or on the basis of participation (for instance, by releasing rewards for reaching specific participation targets in terms of opinions given or consultations joined). Present bias, of course, can also be relevant when it comes to expressing opinions that might be unduly skewed towards the present and underweigh future regrettable consequences.[35]

To better illustrate the role that behavioural analysis can play in consultation design, we offer here two schematic examples in which a threefold analysis of the consultation process is matched with behavioural elements. The three elements of consultation design that we take into account here are: stakeholder mapping; choice of consultation methods and tools; and evaluation.

Consider, first, a regulation concerning *safety at work*: the mapping exercise yields two major stakeholders, namely workers and employers. For workers and employers alike, *optimism bias* is relevant. That is, both stakeholders are likely to believe that they are less likely than average to be victims of accidents at work. This fact leads to an underestimation of risk. It is also relevant for employers that they might interpret evidence and estimates to their own advantage, displaying *confirmation bias* or, more precisely, *self-serving bias*, that is the tendency to take into account only their own benefit. Employers may be victims of *present bias*, as they evaluate lightly the future consequences of loose precautionary measures, while the cost of the initial investment for safety in the workplace looms larger than it should. *Framing* affects both workers and employers, as safety measures are likely to be interpreted as a benefit (gain) for the workers and as a cost (loss) for the employers. The risk attitudes resulting from such a framing leads workers to prefer more stringent precautions, and employers to prefer less stringent ones, contributing again to underestimation of the risk of work-related accidents.[36] There is yet another behavioural element that may lead to biased judgements in this kind of consultation, namely the *availability heuristics*. Availability captures the behavior in which one judges the probability of an event based on the ease of recall of instances of said event. Ease of recall may easily be motivated by memory and recency,

[34] On reward substitution, see KL Milkman, JA Minson and KG Volpp, "Holding the Hunger Games hostage at the gym: an evaluation of temptation bundling" (2013) 60(2) Management Science 283.

[35] Besides the role of behavioural biases, it is quite relevant to take into account the role of *social proof* (see eg RB Cialdini, "Harnessing the science of persuasion" (2001) 79(9) Harvard Business Review 72 and RB Cialdini, CA Kallgren and RR Reno, "A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior" (1991) 24 Advances in Experimental Social Psychology (201) and, in general, of social norms and social norms engineering to foster participation, see C Bicchieri and R Muldoon, "Social Norms" in EN Zalta (ed), *The Stanford Encyclopedia of Philosophy*, available at <plato.stanford.edu/archives/spr2014/entries/social-norms/> (last accessed on 25 September 2018). For a game-theoretic account see C Bicchieri, The Grammar of Society (Cambridge, Cambridge University Press 2006), G Sillari, "Rule-following as coordination: a game-theoretic approach" (2013) 190(5) Synthese 871; for social norms change and its behavioural relevance see C Bicchieri, *Norms in the Wild: How to Diagnose, Measure, and Change Social Norms*. (New York, Oxford University Press 2016) and Cass Sunstein, "Unleashed", available at <ssrn.com/abstract=3025749> (last accessed on 25 September 2018).

[36] Notice that risk attitudes shift also in relation to ther factors, such as, for instance, gender. It might therefore be advisable, in some situations, to split a stakeholder group by gender in order to better deal with shifting risk-attitudes.

therefore employers and workers who have not witnessed accidents in the near past are likely to evaluate it as less probable that an accident will occur in the future. As accident rates are linked to safety measures but also contain an element of chance, in that case we are considering availability-based judgment would be inconsistent with a correct *regressive prediction*.

The identification of biases affecting the stakeholders is a task to be carried out during the stakeholder mapping phase, and it is of consequence in all three elements of the consultation design. In particular, decisions concerning tools and method for the consultation should be affected by the behavioural bias mapping associated to the stakeholders. For instance, in order to counter present and optimism bias in a structured questionnaire, one should attempt to ask questions about possible future negative consequences of present decisions before asking questions relative to the initial cost and investment of providing safety measures. Or, in order to neutralise framing effects in the case of employers, there should be questions eliciting a gain frame (eg related to the expected benefit of having a lower incidence of accidents) in order to balance the loss frame due to the cost of providing safety measures in the first place. In a non-structured open public consultation, in which countermeasures such as the ones just described are less viable, one could still take into account bias in the evaluation phase in a form of *post-mortem* de-biasing to streamline the quality of the opinion collected in the consultation.

A second example highlights an aspect of *seismic risk prevention*. In this case, we consider as major stakeholders homeowners and insurance companies. Homeowners may be *underweighing small probabilities*,[37] reducing their awareness about the importance of protective measures. They may be victims of *present bias*, and therefore evaluate as overwhelming the upfront cost associated to protective measures. They may be affected by the *availability* heuritics, which would make them feel as if serious seismic events were unlikely even though they live in a high-risk area just because the last seismic incident happened long in the past. Insurers, on the other hand, may display *ambiguity aversion*, ie the tendency to prefer situations with non-ambiguous risk to situations in which there is ambiguous uncertainty.[38] Insurers therefore may display the biased opinion that premiums in case of seismic events, for which there is neither an unambiguous risk measure nor an unambiguous measure of the magnitude of predicted loss, be higher than premiums in cases of non-ambiguous risk.[39] Thus, opinions from both citizens and insurers collected in a consultation would likely be biased, and some kind of debiasing effort could and should be introduced as part of the consultation process.

2. Strategic behaviour

a. Dialogue between administration and stakeholders

We focus now on the dialogue between the administration and the stakeholders, to show what kind of strategic element undergirds it and in what way it is significantly

[37] Tversky and Kahneman, supra, note 25.

[38] For instance, people generally prefer to bet on drawing a red ball from an urn that contains 50 red and 50 black balls than from an urn that contains 100 red and black balls in some unspecified proportion, even though the bets are probabilistically equivalent.

[39] *Cf* H Kunreuther, "Mitigating disaster losses through insurance" (1996) 12(2) Journal of Risk and Uncertainty 171.

intertwined with the dialogue among stakeholders. As pointed out above, the interaction between the administration and the stakeholders is meant to both create knowledge pooled from the opinions sent throughout the consultation process and to persuade the administration.

Consultation design leads with the assumption that the administration is not completely informed and uses the consultation to acquire new information or to validate the information it possesses. This information deficit may be grounded on lack of scientific expertise or inability to accurately map the interests potentially affected by the new policy. Acquiring information can also include storytelling by stakeholders that can express their views with reference to their own concrete experiences.

The provision of information by the stakeholders is not without cost, as information has to be discovered, reviewed, organised, and presented. In fact, the more thorough the investigative process on which a stakeholder grounds its opinion, the costlier the provision of information for that stakeholder is going to be. Moreover, as we mentioned in section II, we need to distinguish between technical and non-technical information, and acknowledge that rendering private relevant information public may come at a cost to a stakeholder, since doing so may end up favouring its competitors. While stakeholders, as a group, clearly have an interest in making the administration's decision as close as possible to their interests, it would be to the advantage of individual stakeholders if the influencing of the administration came costlessly. This means that the procedural architecture of consultation has to address potential tensions between individual and collective rationality of the kind captured in social dilemma situations.[40] Collective rationality suggests that, in the case of convergent interests, better information will produce better decisions for all parties involved and for the community at large. But individual rationality may induce some parties to not cooperate if they spot an opportunity to free ride, or if they fear that others would free ride, or if they fear that other parties might use the information to gain a competitive advantage. Typically in a social dilemma individuals are no worse off when they do not contribute and nobody else contributes and are better off if others contribute and they do not. Hence individual rationality may trump collective rationality in a consultation procedure, leading to an undersupply of information. If costs of production and disclosure are not fairly allocated, participation can suffer both qualitatively and quantitatively.

These observations suggest that we can capture a relevant strategic motive of consultation by casting its process as a public-good game where the public good being produced is information whose aim is to influence the decision of the administration. However, there are factors affecting the consultation procedure that require us to elaborate our analysis beyond that of a simple public good model. For instance, we may assume that there are potentially divergent interests among participants and therefore imagine that the production of the public good (information) responds to the dynamics

[40] On social dilemmas and cooperation, see eg RM Dawes and RH Thaler, "Anomalies: cooperation" (1988) 2(3) The Journal of Economic Perspectives 187; RM Dawes et al., "Organizing groups for collective action" (1986) 8 American Political Science Review 1171; R Dawes, "Social dilemmas" (1980) 31 Annual Review of Psychology 169. For a thorough survey of the experimental literature on such problems of cooperation, see JO Ledyard, "Public Goods: A Survey of Experimental Research" in J Kagel and A Roth (eds), *Handbook of Experimental Economics* (Princeton, Princeton University Press 1995) and for the subsequent literature, see Chaudhuri, supra, note 22.

triggered by the presence (or absence) of competing interests. We distinguish two scenarios: (1) where stakeholders have convergent interests; (2) where stakeholders have divergent interests. The architecture of consultation should vary accordingly.

(1) Let us consider, first, the case in which participants in the consultation process do not have competing interests. In this case it seems reasonable to assume that what participants wish to obtain from the consultation is large enough a transfer of information from the public (stakeholders) to the decision maker (administration). Hence, participants have an incentive to provide information to the decision maker, yet a problem of cooperation presents itself. If a participant owns a piece of information, it may not want to spend the resources necessary to make it explicit (either the cost of preparing their comment, or the cost of disclosing private information that may favor competitors, or both) by participating in the consultation process for several reasons: because other participants may offer comparable information, or because the cost of revealing private infromation is deemed too high, or because the information in the hands of the stakeholder counters the interest of the stakeholder itself.

We operate here under the assumptions (i) that stakeholders take into account the cost of revealing private information; (ii) that whenever they decide to reveal information, they reveal information that favours a policy that fosters their interest; and (iii) that their influence on the decision maker is proportional to the quality of the information they provide which, in turn, is proportional to the cost they bear. In this sense, the information provided is a *public good*, since a free riding stakeholder who avoids putting effort in the creation of the good is still able to enjoy it as the output of the consultation process is public, and since public information can benefit (and can be used by) a multiplicity of stakeholders concurrently.[41] In such a cooperative framework, stakeholders may not be interested in the ownership of the information received by the decision maker, as they mainly care that the decision maker receives enough opinions to make an informed decision. This situation triggers social dilemma dynamics, in that a stakeholder may very well be tempted to free ride on the passing on the information by other stakeholders. It is a sort of "bystander effect" in which a stakeholder saves the effort and costs of participating by free riding on others.

(2) However, as we pointed out, there may be diverging interests among the stakeholders in the consultation process. In this case, the cooperative path just mentioned may not occur, and a form of competition among stakeholders can instead appear. Let us consider a simple case in which there are *two* groups of stakeholders with divergent interests. Let us further assume that participation in the consultation process for these stakeholders has the goal of influencing the

[41] There may be further strategic elements in the consultation mechanism, such as costly signalling. For instance, a stakeholder is willing to incur a cost in making some private information explicit to signal their competence and their position. Formal models based on signalling interactions are well suited to capture the strategic elements underlying notice-and-comment procedures in the United States system, in which a third party (the Court) can effectively veto a policy if found inconsistent with the information provided in public comments, see eg S Gailmard and JW Patty, "Participation, process and policy: the informational value of politicised judicial review" (2017) 37(3) Journal of Public Policy 233.

> decision maker to her own advantage as much as possible. Thus, the information offered by the two groups of stakeholders sways the decision maker one way or another depending on which group the more persuasive information is coming from. The public good, in this case, is not given by the sum total of the information disclosed by participants in the consultation process. Rather, the more the information is beneficial to one group of stakeholders, the more it is detrimental to the other group. The strategic element in this case is quite different from the strategic element in the case of aligned interests, in that we have two (or more) groups competing for the production of the public good, rather than a single pool of stakeholders cooperating to build the one informational public good.

In the first case, thus, we model the interaction among stakeholders whose interests are by and large homogeneous as the strategic production of an informational public good that, for the stakeholders, represents the influencing of the administration's decision making. The higher the quality of information supplied, the more the administration's decision will favour the stakeholders. The public good, hence, is straighforwardly given by the sum total of the effort spent by the stakeholders in offering their opinion in the consultation. In the second case, we model the interaction among stakeholders with conflicting interests as the production of a public good that is affected by the relative weight of stakeholders' opinions. In particular, considering the stylised case in which there are two opposed interests, the public good representing the stakeholders' influence on the administration's decision is the result of the supply of information pulling in opposite directions. In this case, then, the public good is given by the *difference* of the total effort spent by a group of stakeholders and the total effort spent by the other group.

b. Dialogue among stakeholders

The second dialogical dynamic in consultation is that among stakeholders. Here there are normative and descriptive questions that may affect consultation design. Should consultation improve stakeholders' knowledge or only focus on the improvement of the administration's informational asset? If consultation should also promote dialogue between stakeholders, how should the design of the consultation be structured? How do incentives to provide existing information and acquire new information change depending on whether the objective is to inform the administration or to increase the dialogue and the exchange of information among stakeholders?

Dialogue among stakeholders aims at increasing mutual knowledge and at fostering exchanges of information, knowledge, and experience. Participants engaged in the consultation may improve their informational assets and modify their position. Such a change does not necessarily lead to higher convergence. As we shall see, the path toward convergence can be facilitated by a specific consultation design when multiple rounds are defined. The challenge of consultation structural design is to provide participants with the right incentives (including intrinsic motivation[42]) to convey existing

[42] See E Fehr and A Falk, "Psychological foundations of incentives" (2002) 46(4) European Economic Review 687; E Fehr and S Gächter, "Reciprocity and economics: the economic implications of homo reciprocans" (1988) 42(3) European Economic Review 845.

information and to produce new information relevant for the decision maker.[43] Two main problems have to be addressed by the consultation design: (1) to define the appropriate incentives to convey private and potentially competitive information; (2) to produce a new public good (information) and to identify the related obstacles to adequately supply it (free ride, incentives to undersupply).

The amount and quality of the information provided is dependent not only upon the available economic resources but also on the participants' cognitive abilities to answer the questions addressed by the administration. As to the economic resources, clearly the variations on the amount of available economic resources may determine different levels of efforts to yield additional information in order to persuade the administration. The design may take into account differences of available resources in order to promote inclusive participation. When the procedure allows for knowledge of the position expressed by others, the challenge also involves the strategic allocation of those resources in response to the information disclosed by previous participants. Consultation design should address the amount of resources parties may invest and how their investment could be distributed over time, depending on the parties' choices to influence the other stakeholders and persuade the administration. In relation to the cognitive abilities, differences between individuals and organisations may require the adoption of distinct instruments aimed at reducing the effects of biases.

In this framework we would like to compare alternative procedural designs. The two examined variables characterising the different designs will be: (1) time and sequence of publication of individual contributions in the consultation process; and (2) the choice of the instruments to consult, depending on the type of stakeholders. In relation to the latter, the definition of the main questions to be addressed by participants in the consultation process is relevant; these questions may be answered by the administration in the consultation design and so are the instruments through which different categories of participants may contribute (questionnaire, interviews, forum, chat, etc). In relation to the former, we analyse two procedural designs. In the first we introduce strategic sequentiality, in that opinions are published "as they come" and may thus provide extrinsic or intrinsic motivations for parties to the consultation who have not yet expressed their opinion to employ more effort in doing so. Sequentiality is clearly a limited dialogical form in which first movers "talk" to players who enter the consultation process at a later stage, but may have no opportunity to "respond". In the second design, we propose a multi-stage procedure in which a further dialogical step is allowed, as there are multiple rounds of consultation.

IV. Cooperative and competitive interactions

In this section we detail the behavioural game-theoretic model on which the dialogical designs described in section III.2 above are based. The underlying assumption of our

[43] Cognitive bias can disrupt productive efforts to convey information. This is why the kind of analysis we offered in section III.1 is highly relevant for consultation design. Behavioural analysis of that kind is needed to identify the risk of parties to the consultation conveying biased information. Particular behavioural insights, thus, should be taken into account to better the quality of the information provided, through specific mechanisms of cognitive empowerment (see N Rangone and F Di Porto, "Behavioural Sciences in Practice: Lessons for EU Policymakers" in A Alemanno and A-L Sibony (eds), *Nudge and the Law: A European Perspective* (Oxford, Bloomsbury 2015).

modelling strategy is that information becomes a public good through consultation, in that it influences the decision-making process of the administration. We assume that stakeholders' opinions are trustworthy and that the decision maker makes the best use of the information it receives. We furthermore assume that the administration has initially an agnostic stance and it is linearly influenced by the information sent by the stakeholders (the players). Players' payoffs are yielded by the gains made by saving search and production costs about information and by the benefits of shared information. The model varies along two dimensions: whether the interests of the stakeholders are convergent or divergent, and whether stakeholders express their opinion simultaneously (that is, ignoring other stakeholders' opinion) or sequentially. The latter dimension is modelled straighforwardly through sequential and simultaneous games. We propose here to analyse the former through the use of two different kinds of public good game.

In the case of *convergent* interests, we have a typical public good game, in which stakeholders prefer that more, rather than less, information be released, but at the same time they have an individual incentive to free ride on the information supplied by others and keep their resources otherwise allocated. Players' endowments represent, in general, their available resources. They may allocate their resources to the task of gathering, elaborating, and presenting information. The larger the amount of resources a stakeholder allocates to such tasks, the better the information received by the decision maker will be, but also the less resources will remain available to the stakeholder for other activities. Thus, providing good information comes at a cost (effort) and yields a public good in that it allows the decision maker to make an informed decision that presumably will benefit all stakeholders. More precisely, players have a certain initial endowment that they can fully or partially invest into a public good. Once all players have decided how much to contribute to the public good, the sum total of the contributions is multiplied by a constant term and divided among all players. This reflects the fact that the information produces benefits for all participants. More formally, let us say that there are n stakeholders (players), each one with a symmetrical endowment of e units. Each player $i = 1,..., n$ offers a contribution c_i to the public good. The sum of all contributions is then multiplied by a constant factor $f < n$, and divided by n players. Thus, the payoff function for player i is

$$u_i(c_i) = e - c_i + k \sum_{i=1}^{n} c_i$$

with $0 \leq k \leq 1$.

In the (basic) case of *divergent* interests, we have two groups of stakeholders each trying to build their own public good, supplying information that pushes their own agenda with the decision maker. In this case the free riding problem lies within each group of stakeholders. The model here is a *competitive* public good game,[44] in which two or more groups of stakeholders compete to influence the decison maker according to their diverget interests. Endowment and effort are understood as before, but the

[44] See G Bornstein and M Ben-Yossef, "Cooperation in intergroup and single-group social dilemmas" (1994) 30(1) Journal of Experimental Social Psychology 52; G Bornstein, "Intergroup conflict: Individual, group, and collective interest" (2003) 7(2) Personality and Social Psychology Review 129.

composition of the public good reflects the divergence of interests at stake. Indeed, the public good in this case is the result of the competition among groups of stakeholders, mimicking the intuition that the stakeholders exert more influence on the decision maker with the more effort they spend to participate in the consultation process. In this case, each group works for the creation of their own public good. The competitive element lies in the fact that however large the amount of public good one group has created, it can be destroyed by the influence on the decison maker exerted by the opposing group, since the effort of the other group influences the administration in the opposite way. This is captured by producing the public good as the *difference* between the sum total of the contributions of each group. Formally, in this case we have *two* groups A and B of m stakeholders each, each stakeholder with the same endowment of e units. Each player i_X (with $i = 1,..., m$, $X = A, B$) offers a contribution c_{i_X} to the public good pertaining to group X. The overall public good, which is multiplied by a constant factor $f < 2m$ and divided by $2m$ players, consists of the difference between the total contributions of one group and the total contributions of the other group. This, the payoff function for player i_X is

$$u_{A_i}(c_{A_i}) = e - c_{A_i} + k\left(\sum_{i=1}^{n} c_{A_i} - \sum_{i=1}^{n} c_{B_i}\right)$$

with $0 \leq k \leq 1$.

Given this setup, what is the strategic analysis of a competitive public good game (CPGG)? We can think of a CPGG as a collection of social dilemmas played within one group, one for each contribution level of the other group. The overall payoffs of the collection of social dilemmas will be higher when the sum total contribution of the other group is lower. Thus, if the group A competing against the group B slacks and does not put in much effort, then, other things being equal, the payoffs in group B will be higher than if group A had put in more effort. The strategic element in a CPGG, therefore, remains the *same* as in a cooperative public good game: contributing 0 is the dominant action, as the return on positive contributions is fractional. Also, the entire group contributing the highest possible amount is Pareto-efficient regardless of the contribution level of the other group. And if all players contribute 0, they are better off than if all players contribute 10. Thus, while players still have an incentive to free ride, divergent and convergent interests define different objectives of the groups participating in the consultation. Both the content and the effort to produce information are affected by the divergent or convergent nature of the participants' interests. Moreover, there is a *psychological* difference between the two incentive structures. We surmise that competitiveness may hinder tendencies to free ride internally and create intrinsic motivation to contribute, bringing about a more significant stream of information in the consultation process.

Whether the interaction yields a larger provision of information when it is cooperative (first case, convergent interests) or competitive (second case, diverging interests) is of course an empirical question, whose answer has important ramifications when it comes to identifying the best consultation mechanism to be implemented. Depending on stakeholder mapping, one can imagine the administration designing consultations with convergent or divergent interests with the goal of increasing or decreasing cooperation in the resulting interaction. The goal would depend on

stakeholder mapping in the sense that stakeholders deserving a higher degree of protection (for instance those who are heavily affected by the policy at stake, yet have little power to influence the decision) should be part of a consultation process that increases their chance of being heard.

There is then the second crucial aspect in the context of consultation mechanism design, that is the question as to whether revealing information simultaneously at the end of the process (having participating stakeholders ignore the information revealed by other stakeholders) increases information provision, or whether the mechanism in which information is revealed "as it comes" so that stakeholders are, or may be, fully informed about the contributions of those who participated before fosters information provision more efficiently. It could be that the answer to the latter question depends on the former, in that when interests converge, simultaneous proceedings provide more information, while when interests diverge, sequential proceedings should be preferred. As we stated, these are empirical questions deserving empirical investigation, since their answers are highly relevant to the issue of the design of consultation procedures.

Summing up: from the theoretical point of view, in all four permutations yielded by the two dimensions we are considering, contributing anything to the public good is a strictly dominated strategy[45] and hence never played by rational agents.[46] We have reason to believe, however, that sequential and competitive setups yield a larger transfer of information to the administration than simultaneous and cooperative ones. Empirically, for instance, we know that in public good games[47] rather high levels of cooperation are observed at the onset, while levels decay during play, suggesting that in an open consultation without publication of the opinions, participants' cooperation could falter. Such decay is mitigated in sequential situations, where a kind of dialogue is introduced. Moreover there is some evidence[48] that competitive public good games trigger higher levels of cooperation than non-competitive ones, even though such evidence is restricted to the simultaneous case. Of course, there is a risk of crowding out cooperators, for instance in a sequential case in which cooperation is weak at the onset. Hence, it is paramount that the administration ensure the highest possible initial participation, in order to promote cooperation in subsequent rounds.

Subject to further research is the question concerning the potential divergence between the outcomes of the dialogue between administration and participants and that among participants. It is not necessarily the case that increasing the transfer of information to the administration corresponds to a more intense exchange among participants. Maximising at the same time the objectives of information transfer to the administration and exchange among participants might not be a viable strategy.

---

[45] For the simultaneaous competitive case, see Bornstein and Ben-Yossef, supra, note 44. The intuition, spelled out above, is that in competition teams face a series of problems of cooperation within each other, one such problem for each level of contribution of the competing team.

[46] The only exception is sequential threshold public good games (see J Duffy, J Ochs and L Vesterlund, "Giving little by little: dynamic voluntary contribution games" (2007) 91(9) Journal of Public Economics 1708), in which the payoff from the public good increases discontinuosly only if a certain threshold of contributions is met; in the sequential case there might be strategic considerations making it convenient for players to contribute the amount necessary on their part so that the group could achieve the threshold.

[47] See Ledyard, supra, note 40, and Chaudhuri, supra, note 22.

[48] See Bornstein, supra, note 44, and Bornstein and Ben-Yossef, supra, note 44, for the simultaneous case.

V. The models: procedural framing and the impact on dialogue effectiveness

We first address the time and sequence of publication of individual contributions to the consultation as one relevant design's variable and offer three possible alternatives:

(1) the consultation procedure does not allow publication of the contributions during the consultation process but only at the end;

(2) the consultation process permits (if participants so desire[49]) to publish the contribution as soon they reach the administration. Potential participants can access the contributions and position themselves "against" the other participants during consultation. However they only have one opportunity, eg they cannot reply to the others in subsequent rounds;

(3) the consultation takes place in multiple rounds. The design determines the sequence of publications among different classes of stakeholders. In multiple rounds, parties may refer to what others have stated and engage them, increasing the dialogical structure of the interaction among participants.

The choice of the consultation structure, instruments, questions, the wording of the questionnaire are all elements that (*cf* section III.1) impact outcome and turnout in ways that behavioural sciences can usefully address. In particular, the models offer three different consultation procedures that, in our view, correspond to three distinct procedural frames. Framing is known, among other effects, to affect risk-propensities,[50] to affect attitudes towards time-discounting[51] and attitudes towards future generations,[52] to cause preference reversals,[53] to impact preferences more generally,[54] or to induce more accepting behaviour in negotiations.[55] Framing effects can be characterised in three classes:[56]

---

[49] See for example a questionnaire in the field of chemicals where the different options are stated in the following way: "2. Received contributions may be published on the Commission's website, with the identity of the contributor. Please state your preference with regard to the publication of your contribution: (Please note that regardless the option chosen, your contribution may be subject to a request for access to documents under Regulation 1049/2001 (http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1454925130412&uri=CELEX:32001R1049) on public access to European Parliament, Council and Commission documents. In this case the request will be assessed against the conditions set out in the Regulation and in accordance with applicable data protection rules (http://ec.europa.eu/justice/dataprotection/)) My contribution may be published under the name indicated; I declare that none of it is subject to copyright restrictions that prevent publication My contribution may be published but should be kept anonymous; I declare that none of it is subject to copyright restrictions that prevent publication I do not agree that my contribution will be published at all".

[50] Tversky and Kahneman, supra, note 25.

[51] GF Loewenstein and D Prelec, "Preferences for sequences of outcomes" (1993) 100(1) Psychological Review 91.

[52] S Frederick, "Measuring intergenerational time preference: are future lives valued less?" (2003) 26(1) Journal of Risk and Uncertainty 39.

[53] A Tversky, P Slovic and D Kahneman, "The causes of preference reversal" (1990) The American Economic Review 204.

[54] SL Schneider, "Framing and conflict: aspiration level contingency, the status quo, and current theories of risky choice" (1992) 18(5) Journal of Experimental Psychology: Learning, Memory, and Cognition 1040.

[55] D Kahneman, "Reference points, anchors, norms, and mixed feelings" (1992) 51(2) Organizational Behavior and Human Decision Processes 296.

[56] IP Levin, SL Schneider and GJ Gaeth, "All frames are not created equal: a typology and critical analysis of framing effects" (1998) 76(2) Organizational Behavior and Human Decision Processes 149.

– risky choice framing (where an uncertain effect is described in terms of gains or losses);

– attribute framing (where a given attribute is described in positive or negative terms); and

– goal framing (in which the goal of a given decision is framed positively or negatively).

We surmise that in the case of consultations yet another kind of framing is relevant: *procedural framing*. Consultation results may vary depending on whether the consultation procedure is framed as a one-way, two-way, or multi-round dialogue. Although the behavioural impact of procedural framing has not been studied in the context of consultation, our game-theoretic underpinning of consultation procedures suggests possible behavioural effects relative to procedural framing. If, as we argued, crucial aspects of the consultation mechanism are to be understood as a public good game, the dialogical framing of the game affects quality and quantity of the information provided by the players (see section III.2). Furthermore, we need to consider the possibility that a particular dialogical frame may have a hindering effect on individual choice bias.[57]

1. Model 1

In the first model, participants do not know what other parties say, egthey do not have access to others' contributions. They act solely based on their expectations about the choices made by the other participants. Their incentives to disclose what they know and to invest in the production of new information may partly depend on the expectations of other parties' choices. This may induce undersupply of information leading to a classic public good game, as we pointed out in section III.2 and analysed in section IV. The problem faced by the consultation designer is to address potential failures to cooperate between parties that may lead to undersupply (less and poorer information), possibly identifying behavioural elements apt to avoid or mitigate undersupply.

Recall from the discussion in section III.2 how, in this model, participants have individual incentives to shirk their effort in providing information toward the administration, both when there are convergent and when there are divergent interests. In the latter, as pointed out in the previous section, there is empirical evidence that the competitive element promotes cooperation, to an extent. This means that the undersupply of information could be mitigated when a multiplicity of stakeholders, bearing divergent interests, participate. However, in a simultaneous process, as in one in which it is impossible or extremely difficult and unlikely to learn what contributions have been provided while the consultation process is still open, there are no strategic incentives to cooperate in the creation of the public good. This means that the framing provides some non-material incentives to increase quality and participation in the

[57] See section V.3 for an example of how a de-biasing consultation frame could work.

dialogue between the administration and the participants, yet in this model the dialogue between participants remains muted.

The dialogue between participants represents a tool in the hands of the designers of the consultation process to add further incentives for participants to offer their opinions in the consultation. Hence, the introduction to such a dialogue would represent a strong push to better pursue the aims of the consultation process. The first step to introduce a dialogical motive among stakeholders is to let participants to the consultation know what the opinions put forth by others are, or, in other words, a system in which contributions to the consultation are published as they come. As a matter of fact, the most widely adopted model is the simultaneous one, although there are exceptions.[58] In theory, the current legislative European framework does not prohibit such publications, but most administrations decide to publish only at the end of the consultation a report which summarises the results.

The lack of dialogical exchange inherent in model 1 can also provide underwhelming consultation results, not only for the lack of intrinsic motivation to participate, but also because of the lack of possible countermeasures against well-known bias of individual choice. Recall from section III.1 how participants in the consultation may express biased judgment, for instance due to confirmation, or to overconfidence, or to hindsight.[59] While insufficient to eliminate bias, being able to be exposed to other subjects' opinions could reduce its impact. We shall see that this desirable outcome can be engineered when the dialogical structure can to some extent be regimented into a consultation architecture promoting de-biasing (see section V.3).

2. Model 2

In the second model the contributions are published "as they come". Participants are able to learn what other parties have said. Here the structure of the dialogue is partly dependent upon the timing decision made by the participants. Two possible strategies can be deployed: wait and see what the others say, or act first and set, at least partly, the consultation agenda.[60]

In this case, given the sequential nature of the interaction, we surmise that stakeholders may choose their effort level not just by considering their individual interest, but also for at least two motives introduced by sequentiality. First, they may act in response to the action of others – be it for strategic considerations, or for psychological mechanisms like imitation, social proof, or herding effects. Second, they may in fact wish to influence the strategy selection of those who have not yet entered the consultation – in particular, expecting a correlation between the quality and quantity of information put forth by the

[58] See REACH regulation.

[59] Confirmation bias pushes decision makers to consider only evidence supporting their pre-existing beliefs; overconfidence referes to the fact that people tend to be mistaken more often that they think they might be, even when taking into account the fact that most people miscalibrate the confidence in their beliefs; hindsight bias refers to the fact that people tend to ascribe a higher probability to possibility of an event occurring after the event has occurred than before.

[60] For public good games studying this kind of sequentiality and leader-follower effects, see, among others, W Güth et al., "Leading by example with and without exclusion power in voluntary contribution experiments" (2007) 91(5) Journal of Public Economics 1023, in which it is shown that leader effects exist, though they are stronger when leaders are *chosen* by other participants.

first relevant mover and that of "follower participants". Some stakeholders will have an incentive to move first or among the first in order to "set the pace" for other stakeholders and supply high quality information. Clearly, very much depends on whom the "community" of participants considers to be the first relevant mover and whether the community of participants share the same view on who the relevant movers are.

Notice also that, as mentioned in section III.1, the introduction of a dialogue among participants may introduce behavioural incentives to share information at the individual level as well,[61] for instance imitation dynamics of social proof, development of social norms and substitutive rewards due to reputational mechanisms. While the introduction of a dialogue, we argue, increases quantity and quality of information produced, it is not sufficient to invariably trigger significant correction for bias of individual judgment such as, among others, the ones mentioned above (confirmation, overconfidence, hindsight).

The willingness to disclose relevant information is determined by the combined objectives to persuade the administration and to avoid giving other parties competitive advantages over knowledge. The incentives to reveal private information by participants to the consultation will have to be balanced with the benefits of persuasion and the costs of making private information public. The resistance to disclose private knowledge may be particularly relevant for industry, but less so for NGOs and other civil society organisations[62] (CSOs). Sequentiality, that is the ability of stakeholders to read the opinions of other stakeholders as they come, rather than when they are collected and published at the end of the consultation process, is a general mechanism that the consultation designer may use to strategically address such an issue. For example, consider a consultation related to the alternative policies to reduce pollution, some involving the introduction of new technologies, others the restriction of polluting activities (ban or some quantitative reduction) without any implications for technological innovation. Industries that may gain competitive advantages by using the new technologies may not be willing to reveal to their competitors their existence and the potential benefits. On the contrary CSOs may have incentives to inform about new available technologies and impose their use on the industry. If the industry knows that CSOs will participate and propose the new technologies, their incentives to hide competitive information may be lowered or disappear.[63] Hence participation of CSOs may increase the quality of information and decrease the incentives of industry to hide high quality information with potential competitive value. Sequentiality among different classes of stakeholders can provide incentives to disclose that would not otherwise exist.

In a world of unlimited economic resources the level of information will only be determined by the efforts made by the other parties and by the initial information endowment of the administration before the consultation takes place. If a participant in the consultation perceives a significant distance of her position from the position of the

[61] A similar result in the context of weak-link coordination can be found in G Devetag, H Hosni and G Sillari, "You better play 7: mutual versus common knowledge of advice in a weak-link experiment" (2013) 190(8) Synthese 1351.

[62] Notice that this consideration lends support to a model in which the endowments of industry and CSOs are comparable: while industry has presumably more resources, revealing information is quite costly, reducing the advantage stemming from abundant resources.

[63] This is reflected in the design of a competitive public good game, in which a group that fears a high level of contributions by the competing group, has an incentive, collectively, to try and match the opposing group's contribution level, as otherwise the resulting public good will be severely negative for them.

administration, knowing the "level of contribution" of other participants might increase her willingness to invest, even if the expected outcome is not proportionate to the expected degree of change that the administration will make. If the participant, for example an NGO, wants the ban of a polluting product and the administration only considers introducing a small fine, the distance would be quite wide and the effort to persuade the administration even to increase the amount of the fine will have to be significant. This implies a larger investment of resources in the consultation than that which is needed where the distance between the two initial positions is smaller. Hence the level of resources to be invested will be partly determined by the "perceived" position of the responsible administration. Moreover, it will be determined also by the choices made by other parties participating in the consultation, since one may want to increase the level of resources employed in response to the perceived effort-level of competitors.[64]

In sum, the amount of effort in a consultation with one round and actual knowledge of the other parties' contributions is defined according to multiple factors among which stand out: (1) the amount of available resources; (2) the distance between the starting point of the administration and that of the participant; (3) the observable efforts made by the participants who have already given their contribution.

3. Model 3

The third model is characterised by a more defined architecture of the dialogue. Such architecture is the outcome of administrations' choices and of the real actions by the participants during the consultation. The model is compatible with multiple designs that the consulting administration can put forward.

Two features can define the characteristics of the third model: the use of multiple rounds of consultation and the definition of questions participants can address in each round. The first and most important decision to structuring incentives correctly is whether to give only one opportunity to speak rather than several opportunities to intervene by organising multiple rounds of consultations. Clearly we are not considering the possibility of an interactive dialogue like those of a forum group or a chat. Both the first and the second model examined above were limited to a single round by design.

A multiple-rounds design allows participants to intervene in each round, favouring a dialogical structure of the consultation where some participants can engage other participants according to rules defined by the administration (for example, limiting every participant to intervening only once in each round of consultation). Such a design would allow a focused dialogue among participants and contribute to the provision of more incentives than model 1 and 2 do, given that participants do not know (model 1) or might not know (model 2) what the others have said.

What is the difference between models 2 and 3? In model 2 there is a basic dialogical structure in which opinions are published "as they come", yet the consultation only spans

[64] In terms of our game-theoretic model: consider a basic payoff function in which the initial public good is 0, and parties influence the administration by offering information, so that their payoff increases (decreases) linearly if the public good increases (decreases). Offering more information could be valuable if I know that the administration will otherwise be swayed by competitors whose interests diverge from mine.

one round of opinions, while in model 3 the consultation spans *multiple* rounds. In the former case, participants have only one chance to influence the decision maker (the administration), while in the latter they (may) have multiple chances. This allows for a repeated interaction and a more articulate dialogical structure, in which, for instance, a player may have an incentive to participate to a subsequent round given what she has heard in previous rounds. This kind of segmentation is a further behavioural element, beyond the ones reviewed in section III, that can bring about several strategic benefits. For instance, participants do not have to put all their effort in offering one opinion, but they may "risk" less on a first round and contribute more subsequently, depending on the outcomes of the earlier rounds.[65] Most importantly, a multiple-rounds setup can give rise to a situation in which the public good payoff increases discretely by springing up past a certain threshold of contributions.[66] Or, a player who is uncertain as to whether she will be allowed to participate in subsequent rounds may for this reason contribute more in the current round.

Thus, an important design variable in a multiple-rounds consultation is the possibility to exogenously restrict the number of participants after the first round. The consultation architecture may be initially open and then give access to the following rounds only to those who participated in the first one. Model 3 with multiple rounds, where the participants to the second and following rounds are only those who took part in the first one, offers a potentially stronger framework to develop stakeholders' interaction than one where new participants can enter the consultation in the second or the third round. It is expected not only that participants can decide the amount of effort on the basis of what the others do, but also that fine tuning on the main policy options may occur after parties in the first rounds have presumably stated their case. The first round may serve the purpose of defining the alternative policy options. The following rounds may force participants to internalise the other parties' options by asking them to redefine their own positions. Hence, there might be a trade off between inclusiveness and efficacy when defining who can participate to the second and following rounds.

The administration can elicit the production of useful information by refining the questions and asking more precise ones related to alternative policy options that emerged in the first round. On the one hand the administration can propose narrower questions and redefine options according to the positions that emerged in the first round. On the other hand participants, knowing that the "game" will be played in multiple rounds, may improve the content of their proposals over the rounds. As a result, the quality of the dialogue among participants can increase and strategic behaviour may be reduced. However, the opposite risk can also materialise. Some parties, knowing that multiple rounds will be played, may not fully disclose their information in the first round, acting strategically in order to adjust both content and level of effort.

The third model introduced here warrants two further observations. First, its multi-stage architecture is independent of whether opinions come simultaneously at the end of

[65] TC Schelling in TC Schelling, *The Strategy of Conflict* (Cambridge, Harvard University Press 1960) was the first to strategise this type of segmentation.

[66] See LM Marx and SA Matthews, "Dynamic voluntary contribution to a public project" (2000) 67(2) The Review of Economic Studies 327; Duffy, Ochs and Versterlund, supra, note 46, and the subsequent literature of *threshold* public good games.

each round or sequentially during each round. Again, empirical evidence on what kind of mechanism is likely to produce more information should inform the design. Second, and more importantly, its multi-stage architecture can be tweaked in a way that directs the consultation process toward the likely more-effective design. It may be possible (and in some cases perhaps advisable) to design the rules governing access to subsequent rounds in such a way that participants end up aligning their interests, either by having a particular interest group drop out of the process, or by revising participants' incentives to discover and disseminate information.[67] While the former possibility indicates that there is a need to protect smaller participants when there is a differential in resources, the latter deserves to be explored as a design possibility to empower participants by creating de-biasing architectures. For instance, an interest group could supply information fostering its own case while omitting information hindering it, displaying (be it on purpose or not) confirmation bias, overconfidence, and hence, possible polarisation. One could think of requiring participants to provide their opinion, along with a "devil's advocate" opinion supporting the opposing view. Stakeholders who fail to provide information against their case, or who provide low-quality opposing information, would be penalised by being prevented from accessing subsequent rounds. The judgement would be exercised by the decision maker, perhaps through the institution of a group of experts who would carefully review and assess the "devil's arguments". While expensive in terms of time and resources, this mechanism would bring about two empowering results that could in fact make it, ex-post, more parsimonious. First, it would hinder the tendency of groups to polarise their opinion by excluding from further rounds of consultation those participants that refuse to offer evidence, opinions, or arguments moderating their view, and by including and making more available opposing arguments and opinions, effectively acting as a counterweight to confirmation bias and overconfidence. Second, if the information "out there" squares preponderantly with one side of the divergent interests, a mechanism carefully designed along the lines just sketched would pressure the other side to drop out of the process, effectively turning a competitive design into a cooperative one.

The three models reach a different balance between the two forms of dialogue. The first model concentrates more on the dialogue between administration and participants. The second model combines the dialogue between participants and that with the administration by making known the contributions as they come. The third model provides a more structured framework for participants' dialogue increasing the potential interactive nature of the game by having multiple rounds. By maximising the dialogical structure between participants, the third model may provide better quality information to the administration, even though it is, ex-ante, a less economical setup than the others.[68]

[67] Rules governing access to subsequent rounds need to be designed with particular care towards both fairness of access and *perceived* fairness of access, so that the democratic, open, and fair nature of the consultation design is not infringed.

[68] It is, however, important to think in terms of ex-post analysis. In this case, model 1 could lead to a lesser information transfer and hence to a lesser quality regulation and hence end up becoming much costlier than model 2 or even model 3, if though more economical ex-ante. It is important to notice, moreover, that there are two lines of considerations justifying the ex-ante more expensive (in terms of time and resources) model 3. One is the ex-post argument just mentioned. The other is that through model 3 the administration can exercise more capillary control both on the information being offered and on the stakeholders offering it, therefore having more and better opportunities to counterbalance inequalities in terms of participation, effectiveness, or inclusion.

Not only can the administration make more informed decisions, but open access consultation proceedings can redistribute knowledge among interested stakeholders. Whether the game is competitive or cooperative will depend on the type of consultation and the design. It is possible that having different rounds may transform a competitive game into a cooperative one, with alliances between participants created over time by de facto selection of the relevant issues and reaching compromised solutions. Participants can contribute in the following rounds to find shared solutions.

VI. Different instruments for different stakeholders? How excessive "tailoring" may undermine the dialogical architecture

So far we have assumed that the consultation procedure does not differentiate consultation tools among stakeholders. The three models assume that only one instrument is to be used across different classes of stakeholders. However if stakeholders' endowments are significantly different in terms of economic resources, competence, and cognitive capabilities it might be worth differentiating the consultation instruments.

Stakeholders mapping is generally made following three criteria: identify those potentially affected by the new instrument, those in charge to implement it, and those interested in the new policy.[69] Neither economic nor cognitive endowments are taken into account according to the current schemes. We suggest incorporating endowments into the consultation design and correlate the choice of instruments with the endowments and/or the level of efforts parties are willing to spend.[70]

Usually, after mapping the relevant stakeholders, the administration in charge has to decide which instruments should be used for which categories of stakeholders. There might be a trade-off between the objective to promote stakeholders' dialogue and the necessity to adapt instruments to the different stakeholders' categories. A single instrument maximises stakeholders' dialogue. Multiple separate instruments, tailored to the economic and cognitive abilities, can improve the quality of the participation but may reduce the effectiveness of consultation as an instrument to create a dialogue. The consultation designer has to choose on a case-by-case basis the degree of instruments' differentiation that maximises the combined objective of building a dialogical architecture and increases individual abilities to contribute.

Once the map is defined then, a decision on the consultation tools should be taken. The consultation tool(s) depend upon the consultation method. The decision may fall on a single instrument or combine different ones according to the type of stakeholders potentially involved in the process.[71] For example, questionnaires may be combined

[69] See EU Commission, supra, note 6.

[70] It would be extremely difficult for the administration to make assumptions about the endowments whereas it is much easier to define different level of endowments and ask the different stakeholders to associate themselves with one.

[71] See EU Commission, supra, note 6, at 76. "The choice of the consultation method will determine the consultation tools. The consultation tools most commonly used are written consultations via consultation documents or questionnaires as well as direct interactions with stakeholders via meetings, conferences, hearings or other events. The selection of the most appropriate consultation tool should take into account • Proportionality; • The degree of interactivity needed (eg written consultation versus stakeholder events/online discussion fora/other internet based tools); • Accessibility considerations (language regime, disability etc); and • Timing requirements. In practice, effective

with hearings when the involved stakeholders have very different incentives to provide information.

To the extent that a single instrument can take a modular form, it should be preferred to the use of multiple instruments directed at different classes of stakeholders. But modularity should preserve a common core of qustions. If such a common core cannot be kept, then it would be more effective to deploy various tools and coordinate them into a single consultation procedure. Clearly stakeholder dialogue in a framework of different instruments can be more difficult to operationalise. The role of administration as a vehicle of different approaches grows when multiple tools are in place.

VII. Conclusions and policy recommendations

Consultation design plays a significant role in ensuring that the objectives of stakeholders' participation in legislative and administrative activities are achieved. We have identified two dialogical interactions: one between administration and stakeholders, and one among the participants in the consultation process. We suggest that behavioural biases and heuristics affect the responses, and that procedural framing should be accurately designed in order to ensure effective participation. We have examined two variables affecting the design: number of rounds and intensity of dialogue among participants. By no means are these the only relevant variables. Many others may influence the design and characterise the dialogical nature of the consultation. By focusing on those two variables we suggest using different models depending on whether the main objective is to acquire information or to promote stakeholders' dialogue. Overall, we believe that one-round consultation with publications of contributions as they come can solve asymmetry problems with the administration. This model in the two variables 1 and 2, can be cost-effective when the main objective is to establish a dialogue between administration and stakeholders. When stakeholders' dialogue is one of the main objectives of the consultation process, it is advisable to use multiple rounds (model 3) to target stakeholders, and to differentiate the questions according to cognitive capabilities and financial resources of contributors. The selection of the stakeholders' group can be left to the contributors and having them choose the category to which they belong. For example, if there are different degrees of complexity, parties can freely select the one they belong to and use the instrument that is correlated to that class of stakeholders.

In multiple rounds, participation should be defined so as to maximise the quality and the efficacy of contributions by designing a dialogical architecture that can develop over time. The distinction between competitive or cooperative games should affect the design and the model of interaction among participants. When information provision is competitive in order to persuade the information, the level of effort will not be undermined by free riding problems. On the contrary, when information provision is

(F'note continued)
consultation often requires a combination of written consultation tools (used for both open public and targeted consultations) and more direct interactions with stakeholders. If the consultation should provide statistically representative results, then particular tools should be foreseen, such as surveys (eg Eurobarometer)".

cooperative it is likely that free riding and underprovision will be a problem that consultation design has to tackle.

The choice between models should be left to the administration, but more awareness about behavioural implications of consulation design should inform the consultation architecture. We strongly suggest that both European and national institutions issue specific guidelines concerning consultation design, taking duly into account behavioural variables of the consultation.